

REMARKS

By the above amendment, informalities in the specification have been corrected, independent claim 1 and dependent claim 3 have been canceled without prejudice or disclaimer of the subject matter thereof, and independent claims 5 and 11 have been amended to clarify and recite further features of the present invention, with the dependent claims, where appropriate, being amended to depend directly or indirectly from claim 5. Further, new dependent claims 12 - 19 have been added, which recite further features of the present invention.

As to the rejection of claims 1 - 4 under 35 USC 102(e) as being anticipated by Ogawa (Patent No. US 6,680,759); the rejection of claims 5 and 6 under 35 USC 102(e) as being anticipated by Kang (Patent No. US 6,621,547); the rejection of claims 5 - 9 under 35 USC 102(e) as being anticipated by Kuwashiro (Patent No. US 5,945,984); the rejection of claim 11 under 35 USC 102(e) as being anticipated by Moon et al (Patent No. US 6,864,937); and the rejection of claim 10 under 35 USC 103(a) as being unpatentable over Kuwashiro (Patent No. US 5,945,984) in view of Ogawa (Patent No. US 6,680,759); such rejections are traversed insofar as they are applicable to the present claims and reconsideration and withdrawal of the rejections are respectfully requested.

As to the requirements to support a rejection under 35 USC 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To

establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Before discussing the non-applicability of the cited art to the claimed invention, applicants note that the present invention is directed to an image display device of the type which is referred to as an active matrix type image display device, for example, wherein a drive circuit supplies signals to respective pixels in an image display part of the substrate through signal lines formed outside of the image display part, and the drive circuit is constituted of a plurality of semiconductor devices, as

illustrated in Figs. 2 and 3 of the drawings of this application, for example. In an embodiment as illustrated in Fig. 1 of the drawings of this application, the respective semiconductor devices are configured so that data is supplied between the respective semiconductor devices which are arranged adjacent to one another through data transfer signal lines indicated as DTL in Fig. 3 of the drawings, for example, or a counter voltage signal line CL, which supplies counter voltage supply signals to a counter electrode CT, is formed on a region between the semiconductor device and another semiconductor device, which is arranged to the former semiconductor device in a manner as shown in Fig. 11 of the drawings of this application. As illustrated, signal line DL supply signal to an electrode of a pixel.

As described at page 2 of the specification of this application under the heading "Summary Of The Invention", applicants have discovered that a phenomena occurs during the manufacturing process used in the fabrication of the image display device having the aforementioned construction in that a spark attributed to static electricity is generated between a data transfer signal line and a drain signal line which is arranged adjacent to the data transfer line or between the counter voltage supply signal line and a drain signal line which is attached adjacent thereto such that there occurs the result that these lines are disconnected. Accordingly, the present invention provides for a dummy signal line, as represented by the dummy signal line DLY in Fig. 1 of the drawings of this application, which is formed between the signal lines DL and the data transfer signal lines DTL, and as shown, the dummy line DLY is formed so as to extend along the signal line DL, as illustrated in Fig. 1 of the drawings of this application. On the other hand, in a somewhat similar arrangement as illustrated in Fig. 11, wherein a counter voltage signal supply line CL supplies counter voltage supply signals to the counter electrode CT, and the signal lines DL

supplies signals to another electrode of a pixel, hereagain, the dummy line is arranged between the signal lines DL and the counter voltage supply signal line CL with the dummy line being formed so as to extend along the signal lines, in the manner illustrated. Hereagain, the dummy line enables prevention of a disconnection due to static electricity caused by spark generated between the aforementioned lines, and by the present amendment, independent claims 5 and 11 have been amended to clarify the structural arrangement with the dependent claims reciting further features of the present invention including the operational aspects of the dummy line. Applicants submit that such features are not disclosed or taught in the cited art, as will become clear from the following discussion.

Turning to the cited art, applicants note that since claim 1 has been canceled, it is not apparent that Ogawa, which has not been utilized in the rejection of independent claims 5 and 11 is applicable thereto. However, applicants offer the following comments with regard to Ogawa in relation to the claimed invention, irrespective of the Examiner's position with respect to Ogawa in relation to claims 1 - 4 of this application. More particularly, Ogawa et al does not disclose or teach a drive circuit as claimed, constituted of a plurality of semiconductor devices wherein data is supplied between the respective semiconductor devices and other semiconductor devices arranged adjacent thereto through data transfer signal lines and that a dummy line is formed between the signal lines which supply signals to respective pixels and the data transfer signal lines. That is, assuming arguendo, that 51a1 and 51a2 in Fig. 2 of Ogawa represent first and second signal lines, such lines do not represent data transfer signal lines, as recited in independent claim 5 nor a counter voltage supply signal line, as recited in independent claim 11. Thus, irrespective of the Examiner's contention that a dummy line is represented by 5a, it is

readily apparent that the dummy line 5a of Ogawa is not arranged between the data transfer signal lines and the signal lines of claim 5 or between the counter voltage supply signal line and the signal lines, as recited in claim 11, and illustrated in Figs. 1 and 11 of the drawings of this application, for example. Thus, it is readily apparent that claims 5 and 11, as amended, and the dependent claims patentably distinguish over Ogawa in the sense of 35 USC 102 and 365 USC 103.

With regard to Kang, assuming arguendo, as contended by the Examiner, although the Examiner indicates that a drive circuit is presented by 310 and includes a plurality of semiconductor devices 320 and other semiconductor devices 330 which are arranged adjacent to the semiconductor devices 320 and that data are supplied between devices 320 and 330 through data transfer lines 313, applicants note that Kang describes 310 as an integrated printed circuit board PCB in column 4, lines 29 - 36, and that 320 is a data-driving signal timing module, whereas 330 is a gate-driving signal timing module. Such modules are not arranged adjacent one another, and it is not seen that 313 represents data transfer lines. More particularly, column 6, lines 44 - 49 of Kang indicates that a signal transmitting line 313, formed on a flexible base substrate 312, is connected at one end to a gate-driving signal output terminal formed on the integrated PCB 310 and the other end of the signal transmitting line 313 is extended to an inactive display area 352b of the TFT substrate 352 close to the first gate-driving signal timing module 330. Thus, it is not seen that data transfer signal lines are provided in the manner set forth in the claims of this application. Additionally, while the Examiner contends that a dummy line (355a) is formed between the signal lines (i.e., data lines) and the data transfer signal lines, (i.e., signal transmitting line) referring to column 6, line 40 to column 7, line 3, applicants submit that it is not seen that the line 355a is formed between the

signal lines and the data transfer signal lines, and it is readily apparent that the dummy line 355a is not formed so as to extend along the signal line, as recited in independent claim 5 and the dependent claims. Furthermore, it is readily apparent that Kang does not disclose a counter voltage supply signal line, as recited in independent claim 11, and the structural arrangement of the dummy line with respect thereto. Thus, applicants submit that independent claims 5 and 11 and the dependent claims patentably distinguish over Kang in the sense of 35 USC 102 and all claims should be considered allowable thereover.

As to Kuwashiro, the Examiner referring to Fig. 3 contends that data transfer signal lines are represented by 783 and signal lines are represented by the data input terminals 641. While 783 represents data interconnections, applicants note that data terminals 641 are not signal lines, as recited. Furthermore, while the Examiner indicates that 731-1 is a dummy line, Kuwashiro indicates that 731-1 is a dummy pad, which is not a dummy line, and applicants submit that irrespective of the contentions by the Examiner, Kuwashiro does not disclose a dummy line formed between signal lines, as defined, and data transfer signal lines, as defined, wherein the dummy line is formed so as to extend along the signal line. Thus, it is apparent that Kuwashiro also fails to disclose or teach the structural arrangement as recited in claim 5, noting that Kuwashiro does not disclose or teach a counter voltage supply signal line and the arrangement as recited in claim 11. Accordingly, applicants submit that independent claims 5 and 11 and the dependent claims also patentably distinguish over Kuwashiro and should be considered allowable thereover.

As to Moon et al, the Examiner contends that 122 in Fig. 6 represents a counter electrode or a counter voltage supply signal line, and 134 represent signal lines. On the other hand, the Examiner contends that 136 represents a dummy line.

Utilizing the Examiner interpretation, it is readily apparent that the dummy line 136 is arranged outside of the signal lines 134 and the counter voltage signal line 122 or 128B, such that a dummy line is not arranged between the signal lines and the counter voltage supply signal line, as recited in claim 11 of this application. Thus, claim 11 and the dependent claims patentably distinguish over Moon et al and should be considered allowable thereover.


Applicants note that none of the cited art disclose or teach the structural arrangement of a dummy line arranged in the manner set forth, wherein the dummy line enables prevention of a disconnection due to a static electricity caused by spark generated between one of the signal lines and the data transfer lines are between one of the signal lines and counter voltage supply line, as recited in the dependent claims of this application. Furthermore, the other dependent claims recite additional features including the feature that the connection between the dummy lines and the signal lines are formed into a seal material which seals a pair of substrates as illustrated in Fig. 8 of the drawings of this application, which feature is not disclosed or taught by the combination of Kuwashiro and Ogawa, irrespective of the Examiner's contentions nor that the dummy line and the signal line are connected at two places, as illustrated in Fig. 10 or that the dummy line includes parallel lines. Furthermore, it is readily apparent that the cited art does not disclose that both ends of the dummy line are not connected to other signal lines and that the signal lines have a bent portion and that the dummy signal line which extends along the signal lines has a corresponding bent portion as illustrated in Fig. 1, for example. Thus, applicants submit that the dependent claims recite further features of the present invention not disclosed or taught in the cited art such that all claims should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 501.43231X00), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Melvin Kraus
Registration No. 22,466

MK/jla
(703) 312-6600